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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,838	08/31/2001	Michael A. D'Annunzio	7784-000193	2811
27572	7590	09/30/2004	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C.			PHAN, TAM T	
P.O. BOX 828			ART UNIT	PAPER NUMBER
BLOOMFIELD HILLS, MI 48303			2144	

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/943,838

Applicant(s)

D'ANNUNZIO ET AL.

Examiner

Tam (Jenny) Phan

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This application has been examined. Amendment received on 06/10/2004 has been entered. Claims 1-23 are original.
2. Claims 1-23 are presented for examination.

***Priority***

3. No priority claims have been made.
4. The effective filing date for the subject matter defined in the pending claims in this application is 08/31/2001.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-23 rejected under 35 U.S.C. 103(a) as being unpatentable over Carneal et al. (WO 99/08429), hereinafter referred to as Carneal in view of Gupta (U.S. Patent Number 6,212,565).
7. Regarding claim 1, Carneal disclosed a communications system for providing a communications link between a ground station and a mobile platform via a satellite (Abstract) comprising: a parent proxy server connected to a ground station (Abstract, Figures 3, 5-6, page 5 lines 6-15, page 8 lines 11-19); a child proxy server located on a mobile platform (Abstract, Figures 3, 5-6, page 5 lines 6-15, page 8 lines 11-19); wherein said child and parent proxy

servers establish a communication link between said mobile platform and said ground station (Abstract, Figure 6, page 4 lines 11-20).

8. Carneal taught the invention substantially as claimed. However, Carneal did not expressly teach the limitation wherein said child and parent proxy servers establish a persistent transmission control protocol (TCP) link between said mobile platform and said ground station.

9. Carneal suggested exploration of art and/or provided a reason to modify the communication link with the persistent transmission control protocol (TCP) link (page 4 line 28-column 5 line 2, column 20 lines 6-13).

10. Gupta disclosed a communication system wherein said child and parent proxy servers establish a persistent transmission control protocol (TCP) link (column 2 lines 1-13, lines 22-49, page 3 lines 15-26, page 9 lines 29-35).

11. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the communication link of Carneal with the teachings of Gupta to include the persistent transmission control protocol (TCP) link in order to save processing time between child and parent proxies since multiple http transfer can use the same connection without having to establish a new connection each time (Gupta, column 2 lines 1-13). In addition, use of persistent TCP connection would help minimize network traffic, since there is no need to open several different connections (Gupta, column 9 lines 29-35).

12. Regarding claim 2, Carneal disclosed a communications system further comprising: a user communication device (UCD) located on said mobile platform and connected to said child proxy server (Figures 5-6).

13. Regarding claim 3, Carneal disclosed a communications system further comprising: a router that is located on said mobile platform and that is connected to said child proxy server (Figures 5-6).

14. Regarding claim 4, Carneal disclosed a communications system further comprising: a web cache service that is located on said mobile platform and that is connected to said child proxy server (Figure 6).

15. Regarding claim 5, Carneal disclosed a communications system wherein said web cache service stores web pages in cache (page 9 lines 1-7, 9-13).

16. Regarding claim 6, Carneal disclosed a communications system wherein said child proxy server accesses said web pages in said web cache service if said UCD requests access to said web pages (Figure 7, page 5 lines 19-21, claim 2).

17. Regarding claim 7, Carneal and Gupta combined disclose a communications system for providing a communications link between a distributed communications system and a mobile platform via a satellite (Abstract), comprising: a ground station; a parent proxy server connected to said ground station; a distributed communications system connected to said parent proxy server; a satellite that communicates with said ground station; a transceiver located on a mobile platform that communicates with said satellites; a router connected to said transceiver; a child proxy server connected to said router; and a user communication device (UCD) connected to said child proxy server (Carneal, Abstract, Figures 3, 5-6, page 4 lines 11-21, page 5 lines 6-15, page 8 lines 11-19), wherein said child and parent proxy servers establish a persistent transmission control protocol (TCP) link between said mobile platform and said ground station (Gupta, column 2 lines 1-13, lines 22-49, page 3 lines 15-26, page 9 lines 29-35).

18. Regarding claim 8, Carneal disclosed a communications system wherein said UCD connects to said child proxy server using a first group of TCP settings (Abstract, Figures 5-6, page 5 lines 7-15).
19. Regarding claim 9, Carneal disclosed a communications system wherein said parent and child proxy servers communicate using a second group of TCP settings (Abstract, Figures 5-6, page 5 lines 7-15).
20. Regarding claim 10, Carneal disclosed a communications system further comprising: a web cache service that is located on said mobile platform and that is connected to said child proxy server (Figures 5-6, page 9 lines 1-7).
21. Regarding claim 11, Carneal disclosed a communications system wherein said web cache service stores web pages (page 9 lines 1-7, lines 9-13).
22. Regarding claim 12, Carneal disclosed a communications system wherein said child proxy server accesses said web pages in said web cache service if said UCD requests access to said web pages (Figure 7, page 5 lines 19-21, claim 2).
23. Regarding claims 13-18, the method for providing a communication link corresponds directly to the system of claims 1-6, and thus these claims are rejected using the same rationale.
24. Regarding claim 19, Carneal and Gupta combined disclose a method wherein said UCD connects to said child proxy server using a first group of TCP settings and wherein said child and parent proxy servers communicate using a second group of TCP settings to optimize said persistent link (Carneal, Abstract, Figures 5-6, page 11 lines 20-25; Gupta, Figure 3 sign 309, column 2 lines 1-13, lines 22-49, column 3 lines 15-26).

25. Regarding claim 20, Carneal and Gupta combined disclose a method for providing a communications link for mobile platforms via a satellite (Abstract), comprising the steps of: connecting a parent proxy server to a ground station; providing a transceiver on a mobile platform; connecting a child proxy server to said transceiver; establishing a communications link between said transceiver and said ground station via a satellite; and setting transmission control protocol (TCP) parameters of said communications link between said child and parent proxy servers for satellite links (Carneal, Figures 5-6, page 4 lines 11-27, page 8 lines 11-19; Gupta, Figure 3 sign 309, column 2 lines 1-13, lines 22-49, column 3 lines 15-26).
26. Regarding claim 21, Carneal disclosed a method further comprising the step of connecting a distributed communications system to said parent proxy server (Abstract, Figures 5-6).
27. Regarding claim 22, Carneal disclosed a method of claim 20 further comprising the step of connecting a user communication device (UCD) to said child proxy server (Abstract, Figures 5-6).
28. Regarding claim 23, Carneal disclosed a method wherein said UCD connects to said child proxy server using a first group of TCP settings and wherein said child and parent proxy servers communicate using a second group of TCP settings (Abstract, Figures 5-6, page 5 lines 6-15).
29. Since all the limitations of the claimed invention were disclosed by the combination of Carneal and Gupta, claims 1-23 are rejected.



30. Claims 1-23 rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. ("An In-depth Survey on Web Caching"), hereinafter referred to as Zhang, in view of Dillon et al. (U.S. Patent Number 6,658,463), hereinafter referred to as Dillon.

31. Regarding claim 1, Zhang disclosed a communications system for providing a communications link between a server and a client (Title) comprising: a parent proxy server connected to a server; a child proxy server located on a client (page 17 Figure 6.1 and associated text); wherein said child and parent proxy servers establish a persistent transmission control protocol (TCP) link between said client and said server (page 13 section 5.1.2 Proxy Servers, pages 19-20 section HTTP connections are persistent).

32. Zhang taught the invention substantially as claimed. However, Zhang did not expressly teach a satellite communications networks having ground station, mobile platform, etc.

33. Zhang suggested exploration of art and/or provided a reason to modify the communication system of Zhang with the satellite communications network (page 14 section 5.2.2 Hardware Approach paragraph 6).

34. Dillon disclosed a satellite communication system including an upstream proxy server [parent proxy] connected to a ground station and downstream proxy server [child proxy] connected to internetwork platform [mobile platform] wherein said child and parent proxy servers establish a persistent transmission control protocol (TCP) link between said ground station and said mobile platform (Figures 2-3, 6-7, column 13 lines 27-34).

35. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the communication network of Zhang with the teachings of Dillon to include the satellite communications network since satellite is an excellent mechanism for carry

multicast data as a multicast packet need only be transmitted once to be received by any number of terminals (Dillon, column 3 lines 47-53). In addition, Satellite multicast data systems are typically engineered with FEC coding in such a way that the system is quasi-error free (Dillon, column 3 lines 53-57).

36. Regarding claim 2, Dillon disclosed a communications system further comprising: a user communication device (UCD) located on said mobile platform and connected to said child proxy server (Figure 4).

37. Regarding claim 3, Zhang disclosed a communications system further comprising: a router that is located on said mobile platform and that is connected to said child proxy server (page 24 Section Some Disadvantages of ICP, page 28 section 8.6 Cache Engine).

38. Regarding claim 4, Dillon disclosed a communications system further comprising: a web cache service that is located on said mobile platform and that is connected to said child proxy server (Figures 4-5, 6-7).

39. Regarding claim 5, Zhang disclosed a communications system wherein said web cache service stores web pages in cache (Title, Abstract, page 3 section 1. Introduction).

40. Regarding claim 6, Zhang disclosed a communications system wherein said child proxy server accesses said web pages in said web cache service if said UCD requests access to said web pages (page 3 section 1. Introduction, page 17 Figure 6.1).

41. Regarding claim 7, Zhang and Dillon combined disclose a communications system for providing a communications link between a distributed communications system and a mobile platform via a satellite comprising: a ground station; a parent proxy server connected to said ground station; a distributed communications system connected to said parent proxy server; a

satellite that communicates with said ground station; a transceiver located on a mobile platform that communicates with said satellites; a router connected to said transceiver; a child proxy server connected to said router; and a user communication device (UCD) connected to said child proxy server, wherein said child and parent proxy servers establish a persistent transmission control protocol (TCP) link between said mobile platform and said ground station (Zhang, page 17 Figure 6.1 and associated text, page 13 section 5.1.2 Proxy Servers, pages 19-20 section HTTP connections are persistent, page 28 section 8.6 Cache Engine; Dillon, Figures 4-5, 6-7, column 13 lines 27-34).

42. Regarding claim 8, Dillon disclosed a communications system wherein said UCD connects to said child proxy server using a first group of TCP settings (Figures 6-7).

43. Regarding claim 9, Dillon disclosed a communications system wherein said parent and child proxy servers communicate using a second group of TCP settings (Figures 6-7).

44. Regarding claim 10, Dillon disclosed a communications system further comprising: a web cache service that is located on said mobile platform and that is connected to said child proxy server (Figures 4-5, 6-7).

45. Regarding claim 11, Zhang disclosed a communications system wherein said web cache service stores web pages (Title, Abstract, page 3 section 1. Introduction).

46. Regarding claim 12, Zhang disclosed a communications system wherein said child proxy server accesses said web pages in said web cache service if said UCD requests access to said web pages (page 3 section 1. Introduction, page 17 Figure 6.1).

47. Regarding claims 13-18, the method for providing a communication link corresponds directly to the system of claims 1-6, and thus these claims are rejected using the same rationale.

48. Regarding claim 19, Zhang disclosed a method wherein said UCD connects to said child proxy server using a first group of TCP settings and wherein said child and parent proxy servers communicate using a second group of TCP settings to optimize said persistent link (Figures 4-5, 6-7, column 13 lines 27-34).

49. Regarding claim 20, Zhang and Dillon combined disclose a method for providing a communications link for mobile platforms via a satellite (Abstract), comprising the steps of: connecting a parent proxy server to a ground station; providing a transceiver on a mobile platform; connecting a child proxy server to said transceiver; establishing a communications link between said transceiver and said ground station via a satellite; and setting transmission control protocol (TCP) parameters of said communications link between said child and parent proxy servers for satellite links (Zhang, page 17 Figure 6.1 and associated text, page 13 section 5.1.2 Proxy Servers, pages 19-20 section HTTP connections are persistent, page 28 section 8.6 Cache Engine; Dillon, Figures 4-5, 6-7, column 13 lines 27-34).

50. Regarding claim 21, Zhang disclosed a method further comprising the step of connecting a distributed communications system to said parent proxy server (page 17 Figure 6.1 and associated text).

51. Regarding claim 22, Zhang disclosed a method of claim 20 further comprising the step of connecting a user communication device (UCD) to said child proxy server (page 17 Figure 6.1 and associated text).

52. Regarding claim 23, Dillon disclosed a method wherein said UCD connects to said child proxy server using a first group of TCP settings and wherein said child and parent proxy servers communicate using a second group of TCP settings (Figures 4-5, 6-7, column 13 lines 27-34).

53. Since all the limitations of the claimed invention were disclosed by the combination of Zhang and Dillon, claims 1-23 are rejected.

***Response to Arguments***

54. Applicants' arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

55. In response to Applicant's argument that Carneal fails to mention the use of a TCP link, it is submitted that this limitation of the claimed invention was disclosed by Gupta as detailed in the above rejection and Carneal is relied upon to combine the satellite network system having parent proxy server, child proxy server, ground station, mobile platform etc. Refer to the above rejection for complete details. In addition, it is submitted that persistence transmission control protocol (TCP) link between proxy servers is well known at the time of invention was made as evidenced by Applicant Admitted Prior Art (Hypertext Transfer Protocol – HTTP/1.1) published in June 1999.

56. As the rejection reads, Examiner asserts that the combination of these teachings render the claimed invention obvious.

57. In response to applicant's submission of Declaration Under 37 C.F.R § 1.131, examiner is withdrawing the Chrungoo referenced published on December 17, 2000 as a prior art in regard to the present invention.

***Conclusion***

58. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

59. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam (Jenny) Phan whose telephone number is (703) 305-4665 or (571) 272-3930 (new telephone number after October 18, 2004). The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on 703-308-3873 or (571) 272-3925 (new telephone number after October 27, 2004). The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

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William Cuchlinski  
SPE  
Art Unit 2144  
703-308-3873